retrieving a document in the document database to produce a retrieval result;

[and]

generating [a plurality] plural types of views [using] for displaying the retrieval result [and the index,] using the display indexes;

20   switching the views[,]; and

displaying the views on a display device.

REMARKS

In the Office Action dated August 29, 2000, the Examiner noted that claims 1-31 were pending in the application and rejected claims 1-31 under 35 U.S.C. § 103(a). In rejecting the claims, U.S. Patents 5,943,669 to Numata; 5,940,831 to Takano; and 5,835,922 to Shima et al. (References A, B and L, respectively) in the February 2, 2000 Amendment, and an article by Lemay et al. (Reference U in the August 29, 2000 Office Action) were cited. Claims 1-31 remain in the case. The Examiner's rejections are traversed below.

Rejection under 35 U.S.C. § 103(a)

In item 9 on pages 3-9 of the Office Action, claims 1-18 were rejected under 35 U.S.C. § 103(a) as unpatentable over Numata in view of Takano. This is essentially the same rejection as in the February 2, 2000 Office Action, except that additional portions of Numata were cited as disclosing features recited in the claims. However, none of the cited portions of Numata teaches or suggests that the documents retrieved by the device disclosed in Numata are cross-referenced as recited in the claims. As a result, the operations recited in the claims that require cross-referenced documents are not performed by the device taught by Numata.

As previously recited in the claims, the documents operated on by the present invention are "cross-referenced message documents contributed to at least one of a forum and a message board established through a computer network" (e.g., claim 1, lines 2-3). It is well known in the art that such documents have a special cross-referencing attribute which is not used in ordinary web pages or the type of documents operated on by the various systems disclosed in the prior art references used to reject the claims. In such forums and message boards, one

article (a mother article) after appearing for the first time is cross referenced by a number of follower articles (child articles) that are submitted in the forum in response to the mother article. Thus, the relationship is that the child articles reference the mother article in a one-way style and the child articles do not have relationships directly referencing each other. This causes a problem as described on page 2, line 13 to page 3, line 7 of the application. The present invention solves this problem by operating on the cross-referenced documents as recited in the claims.

Since the previously recited limitations describing the cross-referenced relationship between the documents were not given sufficient weight, the independent claims have been amended to emphasize this characteristic of the documents and how the cross-referencing of the documents is used in the recited apparatuses and methods. For example, the preambles of all the independent claims have been amended to recite that the documents have "a cross-refer-enced relationship in which a document contributed earlier is referenced by documents contrib-uted afterwards" (e.g., claim 1, lines 4-5). As a result, it is possible for the document group analysis device recited in claims 1, 3 and 8 to determine "for each document in the set, which of the documents is referenced" (e.g., claim 1, lines 9-10). Similar limitations are recited in the classifying operation of claims 9, 11 and 16-18. Thus, claims 1, 3, 8, 9, 11 and 16-18 recite that the documents are classified according to the way in which the documents are refer-enced. On the other hand, the device taught by Numata classifies documents in accordance to the similarity of classification units as described in line 1 on page 4 of the Office Action with reference to Fig. 14 of Numata.

Furthermore, claims 1, 3, 8, 9, 16 and 17 recite "extracting a keyword contained in a document forming part of each group of documents by referring to the document group infor-mation" (e.g., claim 9, lines 10-11) and "displaying ... keywords extracted from the document corresponding to the title, [with] the title and keywords being displayed in areas related to each other" (e.g., claim 9, lines 12-15). In the Office Action, it was asserted that it was obvious from what is disclosed in Numata to display the title and keywords in relation to each other as recited in the claims. However, nothing was cited indicating what would provide the requisite suggestion or incentive to one of ordinary skill in the art to modify Numata to meet the limita-

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tions recited in the claims. For the above reasons, it is submitted that claims 1, 3, 8, 9, 11 and 16-18 and claims 2, 4-7, 10 and 12-15 which depend therefrom patentably distinguish over Numata in view of Takano.

In addition, claim 3 recites displaying "cross references in each group of documents in a tree structure in which at least one of the document attribute information and abbreviated information for each document forming part of the group of documents is displayed at a corresponding node" (claim 3, lines 14-17). In the Office Action, it was asserted that such a display is disclosed in Takano and that it would be obvious to one of ordinary skill in the art to apply such a display in the device taught by Numata. While Takano discloses tracing uniform resource locator (URL) links, it is submitted that Takano does not disclose displaying a tree structure in which each node contains "document attribute information ... (or) abbreviated information" for a document, and that it is not a trivial operation to generate such a display based upon the meager disclosure in Numata and Takano. It is submitted that claim 3 and claims 11 and 18 which recite similar limitations, patentably distinguish over Numata in view of Takano for these additional reasons.

In item 10 on pages 9-12 of the Office Action, claims 19 and 28-31 were rejected over the combination of Numata in view of Lemay et al. and Shima et al. As noted above, the preamble of claims 19, 30 and 31 were amended to further define the cross-referenced relationship between the documents. In addition, claims 19, 30 and 31 have been amended to recite "estimating topic patterns of the cross-referenced message documents stored in a document database based on ... cross references among the documents" (e.g., claim 30, lines 6-10), as described on pages 60-66 of the application. In the last full paragraph on page 9 of the Office Action, it was noted that Lemay et al. discloses "setting up a customer bulletin board". However, nothing was cited in any of the three references used to reject claims 19 and 28-31 describing the cross-referencing of documents or, more importantly, estimation of topic patterns based on the "cross-references among the documents". Similarly there is no disclosure of switching between a plurality of views, as recited in claim 19 at lines 17-20 and similarly in claims 30 and 31. For the above reasons, it is submitted that claims 19 and 28-31 patentably distinguish over Numata in view of Lemay et al. and Shima et al.

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In item 11 on page 12 of the Office Action, claims 20-27 were rejected under 35 U.S.C. § 103(a) as unpatentable over <u>Numata</u> in view of <u>Lemay et al.</u>, <u>Shima et al.</u> and <u>Takano</u>. Claims 20-27 depend from claim 19, and as noted above, <u>Takano</u> combined with <u>Numata</u> does not provide any suggestion of using cross-referencing information to classify or estimate contents of a set of documents. Therefore, it is submitted that claims 20-27 patentably distinguish over the combination of these four references for the reasons discussed above.

Entry of the Amendment

Although several amendments were made to the claims, these amendments were made to increase the likelihood that the claims would be interpreted as intended previously. All of the claims previously recited, "cross-referenced message documents" (e.g., claim 31, line 3) or similar limitations. However, the cross-referenced relationship between the documents was apparently ignored, since there was no indication of where the prior art teaches or suggests operations on cross-referenced documents like those previously recited in the claims. It is submitted that the scope of the claims has not been significantly altered and therefore, no new search should be required. For the above reasons, entry of this Amendment is respectfully requested.

Summary

It is submitted that the references cited by the Examiner, taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-31 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If any further fees are required in connection with the filing of this Amendment, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

By: _Richard A. Gollhofer_
Richard A. Gollhofer
Registration No. 31,106

700 Eleventh St., N.W.
Washington, D.C. 20001
(202) 434-1500

Date: 12/23/00